

ABSTRACT OF THE DISCLOSURE

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5 A square anti-symmetric uniformly redundant array
coded aperture includes transparent and opaque cells and
exhibits a normal mask pattern at a first position and a
10 complementary mask pattern when rotated to a second
position rotationally offset by 90° from the first
position. The coded aperture is utilized in a coded
aperture imaging system for imaging a source of non-
focusable radiation such as a gamma ray or x-ray emitting
15 source. Such a coded aperture imaging system basically
includes a square anti-symmetric uniformly redundant
array coded aperture for receiving radiation emitted by a
source and generating a first coded shadow therefrom at
the first position, and a second coded shadow therefrom
20 at the second position, a rotating platform and motor for
rotating the coded aperture between the first and second
position, a position sensitive detector situated with
respect to the coded aperture to allow the first and
second coded shadows to sequentially impinge on the
25 detector, the detector respectively generating a first
coded optical signal and a second coded optical signal in
response thereto, an optical signal convertor responsive
to the first and second coded optical signals and
respectively generating a first coded electrical signal
30 and a second coded electrical signal in response thereto
and a signal processor responsive to the first and second
coded electrical signals and decoding the coded
electrical signals to generate an image signal which is
representative of an image of the source of non-focusable
radiation.